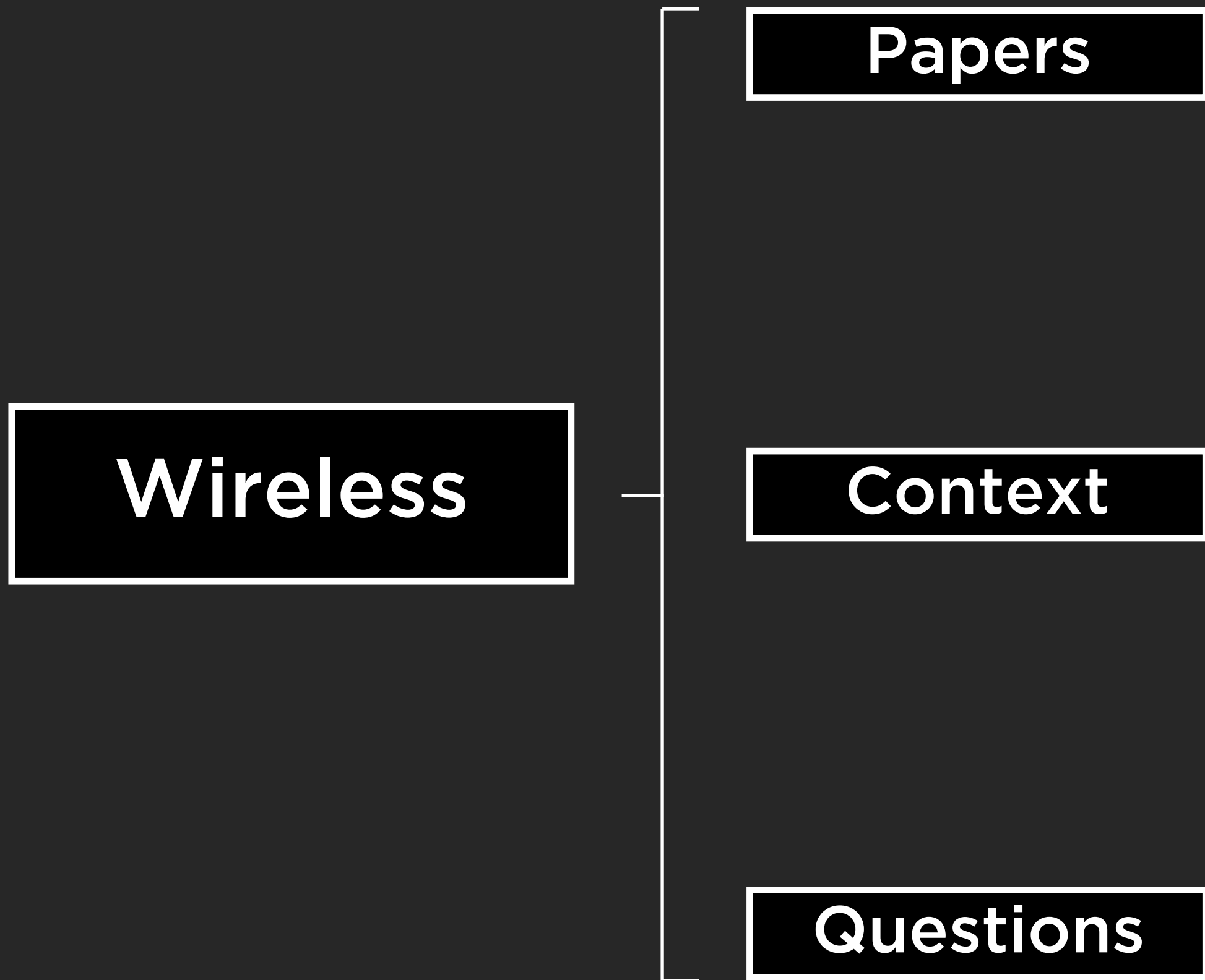


# WIRELESS SIGCOMM PREVIEW

Barath Raghavan  
ICSI / Nefeli Networks / USC

WIRELESS  
IS  
DIVERSE



Drone Relays for Battery-Free Networks (RFly)

A High Performance Packet Core for  
Next Generation Cellular Networks (PEPC)

Wi-Fi Goes to Town: Rapid Picocell  
Switching for Wireless Transit Networks

Empowering Low-Power Wide Area  
Networks in Urban Settings (Choir)

WIFI

CELLULAR

LoRaWAN

RFID

...

# Infrastructure

e.g., Wi-Fi, Cellular (base stations)

# Power

e.g., LoRaWAN, RFID (power limited)

# Range

All trending shorter

Hardware => Software

Miniaturization

Spectrum expansion

Device density

Device mobility

Hardware => Software

Miniaturization

Spectrum expansion

Device density

Device mobility



# Hardware => Software

PEPC

Wi-Fi Town

Choir

Spectrum expansion

Device density

Device mobility

Hardware => Software

# Miniaturization

Choir

Wi-Fi Town

RFly

Device density

Device mobility

Hardware => Software

Miniaturization

Spectrum expansion

Choir

RFly

Device mobility

Hardware => Software

Miniaturization

Choir

Wi-Fi Town

PEPC

RFly

Device density

Device mobility

Hardware => Software

Miniaturization

Spectrum expansion

PEPC

Wi-Fi Town

Device mobility

QUESTION

DOES IT

GENERALIZE?

QUESTION

IS IT

ARCHITECTURAL?

# QUESTION

WHAT ARE ITS  
CROSS-LAYER  
INTERACTIONS?